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ABSTRACT

Four similarities between reading and writing and their corresponding instructional significance are examined in this literature review. Each of the four reviewed topics is prefaced by general instructional suggestions based on research cited in the review. Topics and suggestions are as follows: (1) linguistic--whenever possible, the processes of reading and writing should be integrated within the framework of classroom instruction; (2) cognitive--by virtue of the interrelationship between thought and language, reading and writing should be integrated across all content areas to enhance students' skills in thinking and learning; (3) affective--strategies that take into account students' interest, attention, and motivation are necessary for effective language skill development, since each of these variables influences students' ability to use their language skills to maximum potential; and (4) instructional--instruction should emphasize the complementary nature of reading and writing as mutually facilitative, not mutually exclusive, language skills. The review ends by presenting a model of reading and writing as similar language skills. A three-page reference list is appended. (HOD)

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A Look at Reading and Writing as Similar Language Skills: A Review

Nancy J. Farnan

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Introduction

Knowledge of the similarities between reading and writing has, by itself, little import for the educational practitioner. Practitioners are primarily concerned with the value these similarities have for promoting development of students' language skills. Therefore, this review would be incomplete and the information of little value unless it explored not only the similarities between the language skills of reading and writing, but also the instructional ramifications of these similarities.

The purpose of this review is, thus, twofold: to explore the similarities between these two language skills and to consider the corresponding instructional significance. The emphasis here is on the word "similarities"; for reading and writing are clearly not identical acts. On an obvious and purely superficial level, they are quite different, one dealing with print which has already been produced and the other with its production. It is therefore necessary to look beyond the superficial to research concerning the processes underlying these obvious differences, research which suggests that reading and writing are similar and mutually enhancing language skills.

This paper examines four major areas of similarity between reading and writing. Each of these sections is prefaced by general suggestions for instruction, suggestions which stem from findings of studies cited in each section. The suggestions serve as guideposts by which to approach succeeding information.

Linguistic Similarities

Suggestion 1: Whenever possible, the processes of reading and writing should be integrated within the framework of classroom instruction. In this way, teachers capitalize on their similarities and on research which suggests that growth in one will reinforce and promote growth in the other.

Oral and Experiential Similarities

A study of linguistic similarities between reading and writing represents the most obvious approach to understanding the relationship between these two language skills, a statement of relationship stemming from their development from the same oral language base. In a 13-year study, Loban (1963) explored the relationship between oral language development, reading, and writing. His study of 211 California school children has presented strong evidence that children with superior oral language skills do, in fact, excel in the skills of reading and writing.

For the preschool child, language develops in the social context of an environment of talk and print. Britton (1970) contends that with the first attempts at language, the child finds a direct relationship between talk and a satisfaction of needs. The child not only finds a relationship between his verbalization and the meeting of physical needs, but also in the meeting of his social needs. Spurred on by an inherent need to symbolize, the child's oral language base grows and develops into a tool for understanding and controlling his world. It is clear that oral language learning begins as a pragmatic, utilitarian, need-based activity.

Likewise, early reading and writing experiences are synonymous with functional, pragmatic pursuits. Just as the child's oral language base is rooted in the experiential, he soon learns that print exists as a functional entity. Print from books, magazines, and signs communicates meaning. Similarly, the child's early attempts at writing display recorded messages which communicate meaning.

Harste and Carey (1979) studied writing samples of three- and four-year-olds from different language backgrounds. From these samples, the researchers concluded that the children viewed print as not only requiring a specific form, but also as having definite function, the communication of meaning.

Much evidence exists to suggest that reading and writing, just as oral language, develop as utilitarian language functions in the young child. Not only is the child aware of print as a functional and pragmatic entity, but he realizes that its functional nature helps fulfill the human and very basic need to control and understand his environment. As the child grows in an environment of print and talk, an awareness of language grows and develops, encouraged by the desire to generate meaning (Britton, 1970; Clay, 1975; Harste, Burke, and Woodward, 1979). Baghban (1984), in her comprehensive case study of her daughter's language skill development, concurs when she observes that "at first, oral language satisfied her (daughter's) immediate needs, but once she recognized the value of reading and writing for communication, the processes became intersupportive" (p. 96).

Developmental Similarities

Research into early language development suggests that for oral language, as well as for print forms of language, the child is able to control function before form (Halliday, 1975; Clay, 1975; Harste, Burke, and Woodward, 1979). It is clear that a child's early talk is a gross approximation of adult conversation. The child is able to communicate meaning some time before he is able to present the same message, correctly using the phonemic, syntactic, and semantic cuing systems (Menyuk, 1971). In her review of the reading/writing relationship, Wilson (1981) states that in the process of oral language learning, the child internalizes rules by forming, testing, and revising or modifying hypotheses about language use.

This theory also applies as the child first explores the world of print. In his early encounters with words, the child strives to match the graphemic input to the pragmatic. Vygotsky (1962) suggests that a child has a "sense of word" which includes all associations with it. The young child who reads "brush teeth" on the label of every toothpaste tube is exhibiting his expectation of the function of print. As his awareness of the grapho-phonic system increases, the child who reads "toothpaste" for "Crest," later reads the label as "Crest" or "Colgate." Experience with specific brand, and not generic, names on labels and understanding of graphic configuration as it relates to phonology both contribute to language development (Harste, Burke, and Woodward, 1979). Through generation, testing and modification of his hypotheses, form and function become ever more closely aligned as the child gains increasing control of the grapho-phonic, semantic, and syntactic systems.

Studies of children's early writings reveal similar developmental processes, as the child discards the notion of writing isolated orthographic elements and instead attempts an approximation of cursive writing as the carrier of a coherent message. Falk (1979) supports the developmental similarity of oral and written language by stating that "writing as the written representation of language, and speech, as the oral representation of language, are different but co-equal means to express language. . . . Both are instances of language acquisition"(p. 437).

Read explored the developmental aspects of children's language as he attempted to discover how 20 pre- and kindergarten children categorized the sounds of English. These children had no formal training in reading and writing; and, thus, when they were asked to write, their original or invented spellings often bore little or no resemblance to conventional spelling. In addition, these children arrived at roughly the same invented spellings, which were clearly influenced by what they knew about the sound of their language.

In other words, the children made abstractions about the underlying phonological rules of their language just as they must eventually learn the abstractions of the conventional spelling system. Read inferred that the child approaches reading and writing with "discernible prior conception of its structure" (p. 32).

Henderson and Beers (1977) looked at the developmental aspect of early writing as they researched young children's concept of word. Over a six-month period, they recorded misspellings from children's writings. In the earliest samples collected, spelling pattern sequences occurred which appeared to be dependent upon the young child's knowledge of English phonology. As the children internalized more information about their language, their developing concepts concerning its syntactic, morphophonemic, and lexical structure were revealed in a developmental pattern of increasing spelling proficiency. This pattern appeared consistently in the children studied.

In an article aimed at kindergarten and first grade teachers, Morris (1981, p. 659) "argued that there is a developmental relationship between children's performance on the reading task and the writing task." Whereas Read and Henderson and Beers studied the developmental aspect of the young child's writing, Morris approached this developmental issue by looking at the young child's concept of word in both reading and writing.

Achievement of an understanding of the concept of word in reading assumes that the child 1) has mastered the correspondence of the written word to the spoken word and 2) understands the printed word as being a specific sequence of letters bounded by white spaces. The developmental nature of the concept of word in writing was observed by looking at the child's developing ability to represent phonemic and orthographic elements in print (Henderson and Beers, 1977).

In a study which he conducted, Morris (1979) found a strong correlation (.79) ($p<.01$) between first graders' performance on a word-rhyme reading task and the

children's abilities on a writing task where the task was to represent words phonemically. Morris qualifies the results by saying that although these findings suggest a relationship between early reading and writing, "they do not explain the causal nature of the relationship" (1981, p. 666). However, he continues by remarking that it is safe to say that "growth in one conceptual area (reading) is reflected in and reinforced by growth in the other area (writing)" (p. 666).

It appears, then, that reading and writing not only share the same experiential and oral language base, they also share a developmental inclination. From infancy, the child engages in formation, testing, and modification of hypotheses in an attempt to bind form and function through the grapho-phonic, semantic, and syntactic cuing systems. This utilitarian pursuit pays dividends to the child in the form of understanding and, ultimately, control of his environment.

Cognitive Similarities

Suggestion 2: By virtue of the interrelationship between thought and language, reading and writing should be integrated across all content areas to enhance students' skills in thinking and learning.

A study of reading and writing as similar cognitive processes requires a look at the connection between language and the thinking processes involved in meaning construction. Vygotsky (1962, p. 1) underscores this need when he states, "The study of thought and language is one of the areas of psychology in which a clear understanding of interfunctional relations is particularly important."

The theoretical rationale for looking at this area of similarity is highlighted by Britton's contention that "we use language as a means of organizing a representation of the world" (1970, p. 7). Language, as man's principle means of organizing his representations, allows him to differentiate objects and experiences

into categories and classes. Thus, as the child learns to talk, at the same time he makes sense of the world through talk.

The organizing features of language develop at first with random labellings. Surface features then become hallmarks for groupings, with language allowing an ever-growing repertoire of categories. Functional groupings then begin to take on meaning, and, finally, more abstract generalizations or groupings of objects and experiences are possible. For example, language provides the use of negatives and allows man to see not only red, but also to understand not red. The power of language is reflected in the fact that it allows the individual to draw relations, to consider the concept of opposite as well as sameness, to indicate hierarchial concepts. Abstract concepts could not, in fact, be classified without language. Thus, thinking is regularly shaped and molded by language (Britton, 1970).

Vygotsky (1962) similarly presents the view that cognitive functioning is driven by concept formation and the words utilized therein to achieve mature cognitive development. The word is the pivotal element, and the meaning of each word is a significant generalization, the clue to thought and speech. Concept formation "is guided by the use of words as a means of actively centering attention, of abstracting certain traits, synthesizing them, and symbolizing them by a sign" (Vygotsky, 1962, p. 81). Thus, according to Vygotsky, it is through language that the child engages in the dynamic process of concept formation.

Piaget (1952) presents another view of the relationship between thought and language. Whereas Vygotsky and Britton suggest that words are the pivotal elements through which concepts are formed, Piaget purports that the child's interaction with his environment is the pivotal element in promoting thought. Through this interaction, the child assimilates and accommodates new information, thus formulating concepts and thereby promoting cognitive development. According to Piaget, new material is assimilated into existing schemata. If the new perceptual material does not fit into the existing concept, formation of new or modification of previous

schemata must take place. As an explanation of language development, the formation of concepts, which are integral to cognitive development, occurs through the acts of predicting, hypothesis testing, and revising. Thus, the child's language forms as a consequence of his interaction with the environment.

Although their viewpoints vary, both Vygotsky and Piaget suggest that the individual's language use is inextricably related to concept development and formation. At this point it becomes necessary to explore further the theoretical construct of concept formation as a cognitive activity. Although Gagné (1985) refers to concept formation as a learned intellectual skill rather than cognition, in this paper the terms are used interchangeably.

Lapp and Flood (1983) define concept formation as "a mental state or process whereby we construct an understanding of objects and experiences, particularly in relation to other objects and experiences" (p. 23). Elkind (1976) affirms this need to focus on concept development when he states that "the intellectual processes involved in beginning reading are analogous to those involved in concept formation" (p. 335). He also comments that this is a constructive activity analogous to creative writing.

Henry (1974), in formulating a theory for concept development as it applies to reading, suggests that "there are two basic modes of thinking--analysis and synthesis" (p. 5). Reading has often been viewed as predominately involving the analytic mode of thought, while writing has been viewed as involving a synthesis of information. However, this is only a partial explanation of the roles these thought processes play in reading and writing and the development of concepts. The scope of this role can be broadened through definition.

> Analysis and synthesis are the Greek terms still reserved for the two large modes of logic. . . . One of these operations can never go without the other, but one of them is in the ascendency only because of our purpose. Logical purpose is an organizing drive (Henry, 1974, p. 7).

It is only through synthesis of small parts, working toward an understanding of how the parts fit together, that effective analysis can take place. Within the reading act, analysis of letter parts, sequences, and semantic units may supersede the process of synthesis, but total comprehension is achieved only if the parts can be put together into an understandable whole. This demands a synthesis. On the other hand, writing a word, sentence, or paragraph may clearly be an act of synthesis. However, in order to achieve a comprehensible thought, many small-scale analyses of form and content must take place.

Concept formation, then involves both the "1) discovery of relation and 2) the invention of structure" (Henry, 1974, p. 10). The discovery of relation requires the process of analysis just as the invention of structure requires the strategy of synthesis. Both strategies are cognitive processes which are integral to the acts of reading and writing.

Singer (1976) further explicates the roles of synthesis and analysis in the reading process when he states,

> In the process of learning to read, an individual develops and utilizes his ability to select and organize symbolic stimuli into perceptual units. Through conceptualization, the process of discriminating, abstracting, generalizing and organizing the common elements, relationships, or crucial aspects of a complex figure, an individual reduces a variety of stimuli into fewer categories which simplify and facilitate his learning task by easing the 'cognitive strain ' (p. 305).

Likewise, the writer must engage in similar conceptualization as he addresses structure (words, sentences, paragraphs), content, and purpose of his writing (Collins and Gentner, 1980).

Thus, reading and writing may be viewed as involving not only similar cognitive processes but also similarly active cognitive processes. Hayes and Flower (1980) define writing as "the act of dealing with an excessive number of skills and meeting a number of demands--more or less at once. Viewed in this

way, a writer is a thinker on a full-time cognitive overload" (p. 33). Atwell (1980) suggests that writing is both process and product, involving a transaction between reader and text. Lapp and Flood (1983) have defined reading as "a thinking process in which the reader has to be an active participant. Passivity and successful reading comprehension are mutually exclusive" (p. 284). Likewise, Henry (1974) states that "reading is inextricably embedded in a thinking process, either in analysis or synthesis or in both of these processes combined" (p. 4). Finally, Kucer (1982), in his study of textual cohesion, argues that "coherence is not indigenous to the text itself. It is not a text-bound attribute residing within the confines of the discourse, but rather an 'in-head' phenomenon created through a transaction between the reader and the cues signed by the writer through the text" (p. 3).

The preceding definitions suggest that reading and writing involve similar, dynamic cognitive processes in the act of meaning construction. Goodman and Goodman (1983) support this premise in their review of the relationship between reading and writing. They state that "all of the schemata for predicting texts in reading are essentially the same as those used in constructing texts during writing" (p. 591). Wittrock (1983) concurs by suggesting that "good reading, like effective writing, involves generative cognitive processes that create meaning by building relations between the text and what we know, believe, and experience" (p. 600).

Through language as the primary vehicle for thinking (Britton, 1970), the child learns to label objects and experiences, classify, construct ideas, and to relate the new to the known. Squire relates the language skills of reading and writing to thinking when he states,

> Composing is critical to thought processes because it is a process which actively engages the learner in constructing meaning, in developing ideas, in relating ideas, in expressing ideas. Comprehending is critical because it requires the learner to reconstruct the structure and meaning of ideas expressed by another writer...Thus both comprehending and composing seem basic reflections of the same cognitive process(p. 582).

For these reasons, Squire views composing and comprehending as "two sides of the same basic process" (p. 581).

Kintsch, van Dijk, and Frederiksen (1977) explored discourse comprehension and production by studying processing stages or levels involved in using and understanding the semantic cuing system. They applied the principles of macro-processing to both comprehension and production, principles which van Dijk states are not only valid in the study of comprehension, but are also "valid for other cognitive domains, such as vision, action, thinking, and problem-solving" (p. 3).

van Dijk (1977) represents text from one viewpoint as "simply an ordered sequence of propositions which, under various pragmatic, stylistic, and other constraints, is mapped into a sequence of sentences" (p. 5). In this context, Frederiksen (1977) identifies four interactive processing levels of discourse production and four attendant communicative decisions which must be made by the speaker or writer. A basic communicative decision involves the generation of propositions to be communicated. On another level, Frederiksen refers to the task as "staging the message," wherein the individual sequences and organizes information. In addition, the individual must specify cohesive devices and generate syntax in order to clarify propositional intent and communicate meaning. He also suggests that with yet further research into the explication of discourse production, "comprehension could then be described as a part of a communicative process that involves the cognitive processes of both speaker (or writers) and comprehenders" (p. 318).

Incorporative Squire's (1983) view of comprehending and composing as being "two sides of the same basic process," the reader also utilizes discourse cues, his knowledge representations or schemata, and his expectations or anticipations of language use to generate meaning from text which has been produced by the writer. The reader approaches the task of comprehension through application of various

strategies. According to Kintsch's (1977) model of processing stages in comprehension, these strategies include analyses of linguistic structure and conceptual/propositional content, pragmatic analysis, and comprehension of propositional macrostructures. These stages appear to be reciprocal to Frederiksen's levels of discourse production. A view of comprehension and composition as reciprocal functions substantiates the notion that the rules for macro-processing do, as van Dijk suggests, apply generally to cognitive domains, whether in comprehension or production of text.

Athey (1983) affirms the cognitive similarity between language skills. She relies on the cognitive psychologist's view of knowledge and understanding when she states that

> knowledge is not a simple reproduction of what is experienced, but an active construction embodying elements of what is previously known, what is believed, and what is expected. The constructive nature of experience carries over into our dealings with language, both oral and written. Language has a cognitive base, which is the same whether the activity be listening, speaking, reading, or writing (p. 197).

Rice (1984) reviews recent research into the psychological differences between comprehension and production of language. The studies she explored emphasize the interaction of conceptual knowledge, linguistic understanding, and memory--specifically, retrieval processes. In addition, they reveal that, contrary to the long-held axiom that comprehension abilities precede production capabilities, the opposite quite often occurs. Rice concludes that "there are no sharp distinctions among comprehension, production, and language. Instead, all performances and understanding are embedded in an interrelated thought system" (p. 153).

Affective Influences

Suggestion 3: Strategies which consider students' interest, attention, and motivation are necessary for effective language skill development; for each of these variables influences, either positively or negatively, students' ability to utilize their language skills to maximum potential.

Because the influence of affect on the processes of comprehension and composition is difficult to measure, it tends to be an area which has been only scantly explored. Mathewson (1976) has proposed a model of reading comprehension which focuses on the role of affect on reading. Approached from the viewpoint of experimental social psychology, Mathewson's "Acceptance Model" includes the variables of attitude, motivation, attention, and comprehension. He acknowledges that his model is not a comprehensive explanation of the reading process, but that its research-based components provide a viable look at the role of affect in reading comprehension.

In his study of the information processing load in writing, Bereiter (1980) highlights the role of affect in the composition of text. He suggests that the cognitive complexity of the composition task imposes constraints of attention upon the process, i.e., certain levels of the process must become automatic before the writer can focus attention on more complex cognitive demands. However, under certain conditions in which emotional stimuli are present, additional schemata may be activated. Bereiter cites a study by Menig-Peterson and McCabe (1977) which concluded that "although young children tend to produce incomplete and unfocused narratives under ordinary task instructions, they frequently produce complete and well-integrated narratives when stimulated to tell about an event of strong emotional import" (Bereiter, p. 81). Thus, under facilitating emotional conditions, children were found to exhibit a degree of language usage skill comparable to older children or adults.

Wittrock's model of generative reading comprehension includes three components: generation, motivation, and attention, therein placing emphasis on the role of affect. He suggests that "the meaning the learners generate about the causes of learning influences their motivation and their willingness to become active in generative learning" (p. 602).

Although the primary focus of Britton's book Language and Learning is to explore the role of language in the processes of thinking and learning, he too emphasizes that man's perceptions and feelings, or affect, exert definite influence over how he organizes his representations of the world. In fact, he comments that the dearth of knowledge concerning the influence of affect on learning is "positively dangerous" (1970, p. 8).

This dearth of knowledge need not continue to impact the learning process. Educational research has long dealt with variables which are unobservable and difficult to measure (i.e. learning, itself), yet well-designed research continually provides knowledge which adds to existing stores of information concerning the processes of teaching and learning.

Instructional Viewpoints

Suggestion 4: Reading and writing instruction should emphasize the complementary nature of their relationship as mutually facilitative, not mutually exclusive, language skills.

Several years ago Applebee (1977) stated, "Most studies have sought to relate oral language ability to reading and writing rather than to relate reading and writing to one another" (p. 534). A few years later, Deford (1981) cautioned that "as educators, we need to view reading and writing as integrated and supportive processes--not isolated skills to be practiced, dissected, and analyzed in artificial settings" (p. 652). According to Britton (1970), "What is important is the marriage of the process of composing in written language to that of reading, and the relating of both to the learner's spoken language resources" (p. 159). The following research focuses on reading and writing from an instructional perspective as mutually enhancing language skills.

In a study of 92 college students in a remedial English pilot program at Ohio State University, Lunsford (1978) compared reading skills and writing skills and strategies in a pretest-posttest situation. After a one-semester program designed to increase their writing abilities, she concluded that "all language skills are related--that level of reading comprehension is related to complexity of sentence formation (or syntactic maturity) and that both are related to mature, synthetic thought processes" (p. 5). Pretest scores of her study indicated that all subjects performed poorly on reading and writing tasks, while posttest scores indicated parallel gains in both skills. These results led Lunsford to the following instructional insights:

1) The need for refashioning programs which separate reading and writing skills and strategies

2) The value of developing writing tasks which require student generation as well as combination of sentences

3) The necessity for fostering of students' inferencing, abstracting, conceptualizing, and synthesizing abilities.

After compiling what she refers to as an exhaustive amount of information, Lunsford concludes that "the teacher of writing must automatically and always be a teacher of reading" (p. 49).

Salvatori (1983) compared university students' reading and writing patterns and concluded that in order to grow and develop as a proficient writer, one must also grow and develop an ability to interact effectively with text as a reader. She contends that poorer readers

> fail to realize that the identification of one idea among many others is only one step toward a more complete and dynamic reading. They perform one synthesis rather than various syntheses and tend to settle too soon, too quickly, for a kind of 'blocked' reading. Interestingly, the same 'blocked' pattern has a tendency to characterize their writing as well (p. 661).

Salvatori's observations of students' applied strategies in meaning construction in both reading and writing indicate that the two language skills

are, indeed, interrelated. From the perspective of a teacher of composition and literature, she suggests that her research implies that "the activity of reading seems to subsume and activity of writing to a greater degree than most composition pedagogy presumes" (p. 666).

Spivey (1983) conducted a study with 40 college juniors and seniors in which she compared the performance of able and less able comprehenders on a discourse synthesis task, a task involving both reading the original text and writing a synthesis. Results of the study confirmed the hypothesis that able and less able comprehenders differ on both product and process variables. The major product variables contributing to this difference were holistic quality, organization, and connectivity. In addition, the two groups differed in the content they selected as important. Her conclusions tend to substantiate previous research findings that postulate a dynamic interconnection between the language skills of reading and writing.

Of course, studies such as those above, dealing with post-secondary students, are not necessarily generalizable to other age levels. However, prior knowledge and developmental levels are difficult variables to pinpoint and control. Within any age group, these variables may vary significantly. Certainly, the ideal is to test hypotheses about language use across all age and ability levels.

Stotsky (1982) reviewed over 12 studies which explored the role of writing in developmental reading. The various forms of writing included dictation, reproduction, paraphrasing, summarizing, précis writing, and sentence combining. She concluded that "by requiring students to respond in writing to words and ideas that they are asked to recall, reproduce, restate, select from, generalize, reorganize, integrate, or elaborate upon, we may be providing them with the most active comprehension practice possible" (p. 339).

In another review of reading/writing relationships, Stotsky (1983) examined more than 90 studies, both correlational and experimental in nature, attempting to elucidate the effect of reading comprehension on writing skill and the effect of writing on reading. From her review, she concluded that

1) Better writers tend to read more than poorer writers and also tend to be better readers.

2) Better readers tend to produce more syntactically complex text than poorer readers.

3) Writing exercises used to improve writing skills had little or no effect on reading.

4) Reading exercises and strategies designed to improve writing were as, or more, beneficial than grammar or additional writing practice.

5) Writing exercises specifically designed to improve reading comprehension and retention of information had a significant level of success.

Eckhoff (1983) researched the effects of children's reading on their writing by analyzing basal readers and writing samples from two second-grade classes. Because of the significant variability in the two basals, she was able to analyze their linguistic structures and compare them to the children's writing. She found that the writing samples clearly mirrored the linguistic structures of the respective basals. She concluded that "elementary language arts instruction would benefit, it seems, from texts that help children learn to decode and, at the same time, provide models representative of literary prose" (p. 616). Eckhoff's findings suggest, once again, a dynamic interconnection between the language skills of reading and writing.

Conclusions and a Model of Reading and Writing as Similar Language Skills

The intention of the following model is to delineate implications from theory and research concerning the relationship between the language skills of reading and writing. Division of the model into segments bounded by broken, rather than solid boundaries highlights the interactive, recursive nature of the relationship among the segmented variables. The core of the model is logical purpose, which determines the nature of the language skill to be utilized and contributes to the reader's/writer's expectations in pursuit of meaning. Logical purpose is also bounded by broken lines, for throughout the reading and writing processes, this, too, is subject to input and revision.

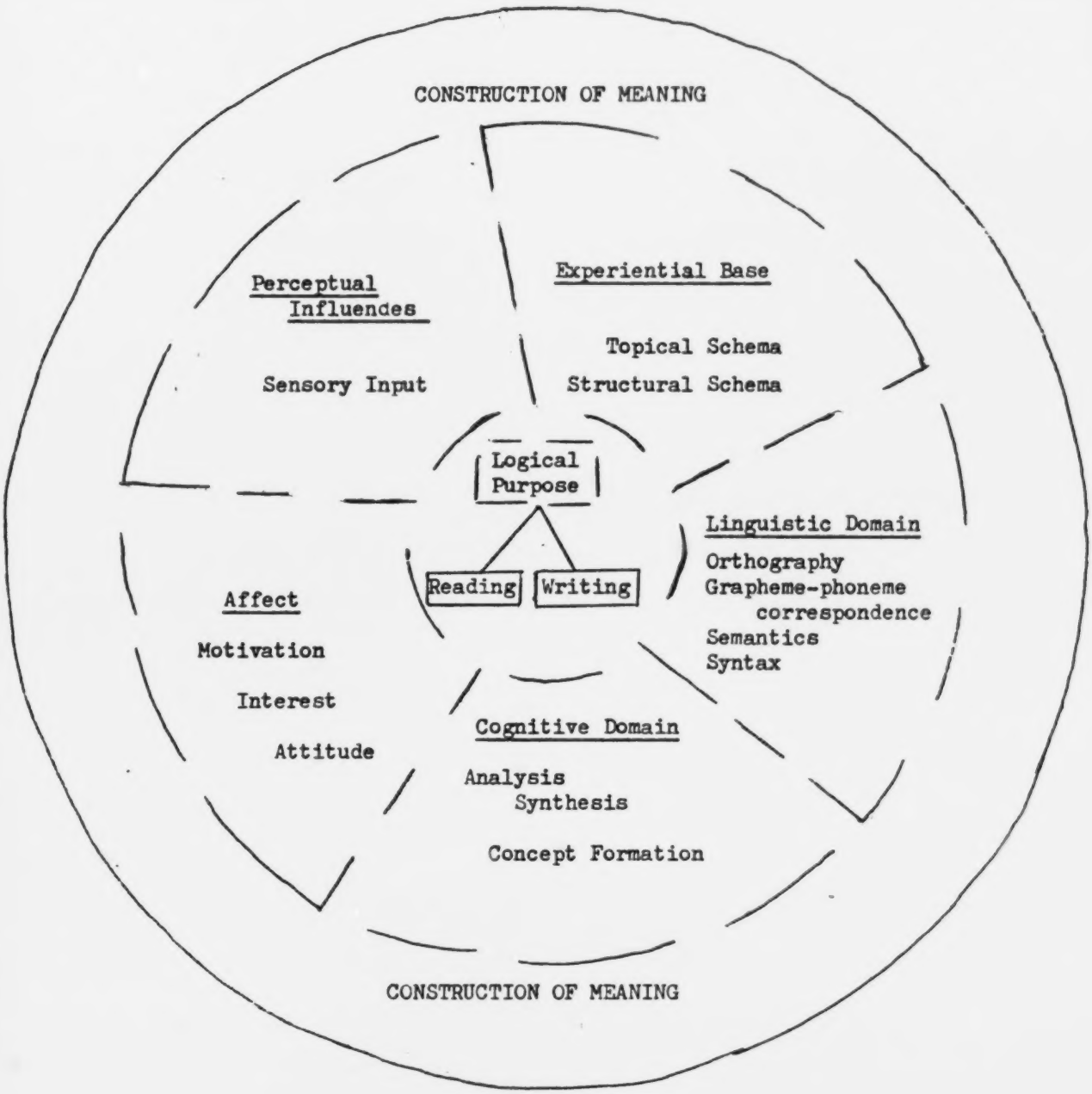
The entire model is encircled by the end result of both processes, the construction of meaning. However, just as the meaning develops from purpose, through modality and process, the constructed meaning can serve as input to affect initial purpose.

Obviously, this model is general and does not account for differences either among individuals or texts. However, it does attempt to specify constructs which might serve as a basis for continuing, in-depth research and as a strong base for methodological decisions.

Jensen (1984) verifies constructs within the model when she states, "The function of both reading and writing is communication. Both processes require similar abilities, similar analysis and synthesis--comparing and contrasting, connecting, and reevaluation--the same weighing and judging of ideas" (p. 4). Indrisano (1984) adds confirmation by asserting that

> comprehension and composition are processes of communication, whereby the sender(s) of a message interacts with the receiver(s) of a message through the use of a common language and similar experiences. . . .Thought is so much a part of these communication processes that many psychologists have suggested that language and higher order thought are virtually inseparable. In addition to shared linguistic and cognitive characteristics, comprehending and composing share affective qualities as well, since human needs, goals and interests inevitably impact communication (p. 2).

Model of Reading and Writing as Similar Language Skills



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